

CLAIMS:

1. A method for reading the surface of a test strip comprising an image, comprising:

scanning the reader head in a reflectance reader of to a first position over the surface comprising the image

determining a first amount of light reflected from the surface comprising the image;

illuminating the surface for light of a first wavelength, and determining a second amount of light reflected from the surface;

illuminating the surface for light of a second wavelength, and determining a third amount of light reflected from the surface; and

determining a parameter correlated with the intensity or shape of the image.

2. The method of claim 1, wherein the reader is a reflectance reader with a reader head that comprises:

a reader head body;

a light emitting diode;

a first fiberoptic bundle optically coupled to the light emitting diode;

a photodetector;

a second fiberoptic bundle optically coupled to the light photodetector;

an aperture in the reader head body;

a plurality of fiberoptic conductor ends arranged in a sigmoidal distribution in the aperture, a first portion of the fiberoptic conductor ends being of fiberoptic conductors of the first fiberoptic bundle, and a second portion of the fiberoptic conductor ends being of fiberoptic conductors of the second fiberoptic bundle.

3. The method of the claim 1, wherein the reader further comprises,

Sub E1
C4

a control unit including a processor modified with a software subsystem, wherein the software is for analyzing the data produced in the test. NAB

4. The method of claim 1, wherein the method comprises an immunoassay performed on the test strip. OK

5. The method of claim 1, wherein the reader is a reflectance reader, comprising:

a reader head comprising:

a reader head body;

a light emitting diode;

a first fiberoptic bundle optically coupled to the light emitting diode, and adapted to transmitting light from the light emitting diode;

a photodetector adapted for generating a reflection signal in response to reflected light;

a second fiberoptic bundle optically coupled to the light photodetector, and adapted to transmit an amount of reflected light to the photodetector;

an aperture in the reader head body; and

a plurality of fiberoptic conductor ends arranged in a sigmoidal distribution in the aperture, a first portion of the fiberoptic conductor ends being of fiberoptic conductors of the first fiberoptic bundle, and a second portion of the fiberoptic conductor ends being of fiberoptic conductors of the second fiberoptic bundle, the plurality of fiberoptic conductor ends being further arranged in a substantially coplanar relationship; and

a reader housing comprising:

a housing body; and

a cassette slot adapted to receive a test device.

6. The method of the claim 5, wherein the reader further comprises,

Sub E1
a control unit including a processor modified with a software subsystem, wherein the software is for analyzing the data produced in the test. ^{112, NAB} ^{NAB}

7. The method of claim 5, wherein the method comprises an immunoassay performed on the test strip.

8. The method of claim 1, wherein the parameter is the amount of an analyte in a sample, which is a function of the first amount of light reflected, the second amount of light reflected, and the third amount of light reflected. ^{NAB}

9. The method of claim 1, wherein the method is for determining an amount of an analyte in a sample by correlating the reading with the amount of analyte in the sample. ^{NAB, 112, 2nd} ^{what reading?}

10. The method of claim 1, wherein the surface comprises an assay test strip. ^{112, 2nd}

11. The method of claim 1, wherein illuminating with light of said first wavelength includes illuminating with light of said first wavelength, wherein said first wavelength is selected to reflect substantially equally from all regions of the immunoassay test strip, whereby said second amount of light is indicative of the immunoassay test strip. ^{sub E3} ^{C7}

12. The method of claim 1, wherein illuminating with light of said second wavelength includes illuminating with light of said second wavelength, wherein said second wavelength is selected to reflect substantially optimally from the test region of the immunoassay test strip, whereby said third amount of light is indicative of an amount of label at the test region of the immunoassay test strip.

13. The method of claim 1, wherein the analyte is fetal fibronectin.

14. The method of claim 5, wherein the analyte is fetal fibronectin.

15. The method of claim 1, wherein the image comprises a stripe on the surface of the test strip.